

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003991 A3

(51) International Patent Classification⁷: **G06F 15/78**,
15/80

(NL). DE OLIVEIRA KASTRUP PEREIRA, Bernardo
[BR/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven
(NL).

(21) International Application Number:
PCT/IB2004/051055

(74) Agent: DE JONG, Durk, J.; Prof. Holstlaan 6, NL-5656
AA Eindhoven (NL).

(22) International Filing Date: 30 June 2004 (30.06.2004)

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03101975.5 2 July 2003 (02.07.2003) EP

(71) Applicant (*for all designated States except US*): KONIN-
KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

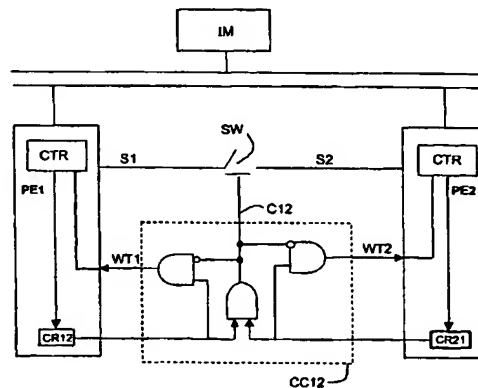
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): PIRES DOS REIS
MOREIRA, Orlando, M. [PT/NL]; c/o Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL). VAN ACHT, Victor, M., G.
[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven

[Continued on next page]

(54) Title: SYSTEM, METHOD, PROGRAM, COMPILER AND RECORD CARRIER



(57) Abstract: A processor system is described comprising at least a first and a second processor element (PE1, PE2). The first processor element (PE1) has a cluster request indicator (CR12) related to the second processor element and the second processor element (PE2) has a cluster request indicator (CR21) related to the first processor element. The processor elements have an instruction set enabling dynamic control of the indicators. The indicators (CR12, CR21) have a value range comprising at least a first value (positive indicator) indicating that the processor element requests to form a cluster with the related processor element, and a second value (negative indicator) indicating that the processor element does not request to form a cluster with the related processor element. The system further comprises a cluster control facility (CC12) which detects the value of the cluster request indicator and organizes the processor elements in clusters in accordance with the detected values. Two processor elements belong to the same cluster if they have positive indicators related to each other, or if there is a sequence of processor elements comprising those two processor elements wherein each pair of subsequent processor elements has positive indicators related to each other.

**Declaration under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*

Published:

- *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

30 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.